

October 3, 2005

Peter Van Alyea
Redwood Oil Company
455 Yolanda Avenue, Suite 200
Santa Rosa, CA 95404

Ground Water Monitoring Report
August 2005
Redwood Oil Service Station #102
7716 Old Redwood Highway
Cotati, California
ECM Project # 98-516-14

Dear Mr. Van Alyea:

This report provides the results of the quarterly ground water monitoring at Redwood Oil Service Station #102, located at 7716 Old Redwood Highway in Cotati, California (Figure 1, Appendix A). On July 11, 2005, ECM personnel visited the site. Ground water elevations were measured the ten monitoring wells and ground water samples were collected from six monitoring wells (MW-1A through MW-6), in accordance with the site monitoring program. The well locations are provided on Figure 2 (Appendix A).

Ground water levels were measured in each of the wells. Free-phase hydrocarbons were not observed in any of the wells. Wellheads and well vaults were observed to be in good condition. Water level data is provided in Table 1 (Appendix B). Ground water monitoring was conducted at 7675 Old Redwood Highway on July 22, 2005. Ground water elevation data for the adjacent site at 7675 Old Redwood Highway is included in Table 4 (Appendix B).¹ A ground water elevation contour map is included as Figure 2 (Appendix A). Ground water elevations in 7675 Old Redwood Highway wells are provided on Figure 2, but were not used in ground water contouring.

The ground water samples were forwarded under chain of custody record to Entech Analytical Labs of Santa Clara, California for analysis. Analytical results for ground water are included in Tables 2 and 3 (Appendix B). Ground water samples were collected in accordance with ECM Standard Operating Procedure - Ground Water Sampling (Appendix E). The chain of custody document and laboratory analytic reports are included in Appendix C. The water sampling data

¹

Ground water elevation data for the 7675 Old Redwood Highway site was provided by Cambria Environmental in an e-mail to ECM Group, September 19, 2005.

sheets are included in Appendix D. Purge water and decon rinseate were transported to an ROC container for appropriate disposal.

Wells MW-1A, MW-2A, and MW-3 represent the most impacted areas of the site, and are sampled on a semi-annual basis in May and November. Concentrations of gasoline, BTEX compounds, and the oxygenates TBA and MTBE have consistently been moderate to high in wells MW-1A through MW-3.

Contaminant concentrations have been consistently low or below detection limits for all contaminants of concern in samples from wells MW-4 through MW-6. Analytical results from this sampling event were consistent with results from prior sampling events for samples from wells MW-5 and MW-6. Gasoline and BTEX compounds were detected at low concentrations. No oxygenates were detected in the samples collected from MW-5 or MW-6. Well MW-4 is sampled on a semi-annual basis in May and November.

Wells MW-7A and MW-8A were installed in April, 2005 to monitor groundwater at approximately 40-55 ft bgs. Wells MW-7B and MW-8B were installed in April, 2005 to monitor groundwater at approximately 60-75 ft bgs. Wells MW-7A and MW-7B, and MW-8A and MW-8B are nested in order to evaluate the vertical extent of contamination at the site.

Samples from MW-7A have contained high levels of contamination, consistent with other monitoring wells in the vicinity. A very high level of MTBE was detected in the sample from this sampling event. Detection limits were raised for other contaminants due to the high concentration of MTBE present in the sample. No other contaminants were detected at the increased detection limits in the sample from MW-7A. The sample from MW-7B contained low concentrations of gasoline, BTEX compounds, and MTBE. The concentrations in MW-7B were significantly lower than concentrations in sample from well MW-7A.

The sample collected from well MW-8A during this event contained low concentrations of gasoline, BTEX compounds, and MTBE. Concentrations were consistent with other site wells. The sample from well MW-8B contained lower concentrations of gasoline, BTEX compounds, and MTBE than the sample from MW-8A.

Thank you for the opportunity to provide environmental services to Redwood Oil Company.
Please call if you have any questions.

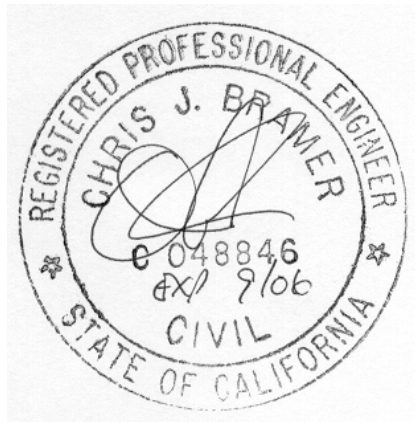
Sincerely,
ECM Group

A handwritten signature in blue ink, appearing to read "David Hazard".

David Hazard
Environmental Scientist

A handwritten signature in blue ink, appearing to read "Chris Bramer".

Chris Bramer
Professional Engineer #C048846



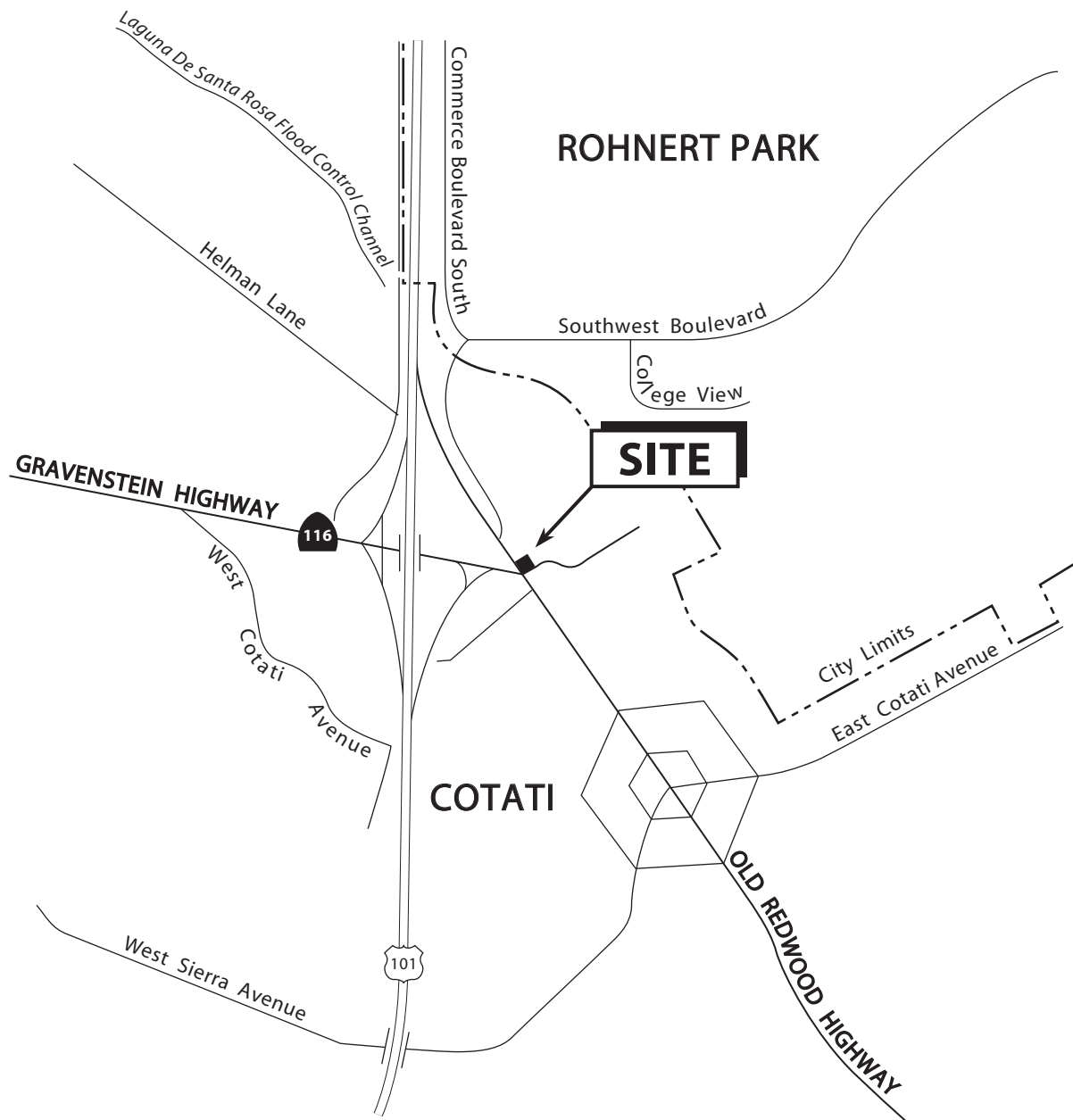
Appendices:

- A - Figures
- B - Tables
- C - Chain of Custody and Laboratory Analytical Report
- D - Water Sampling Data Sheets
- E - Standard Operating Procedure

cc: Darcy Bering, Sonoma County Department of Health Services

APPENDIX A

FIGURES



Base map ref: Thomas Bros.

Figure 1. Site Location Map – Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

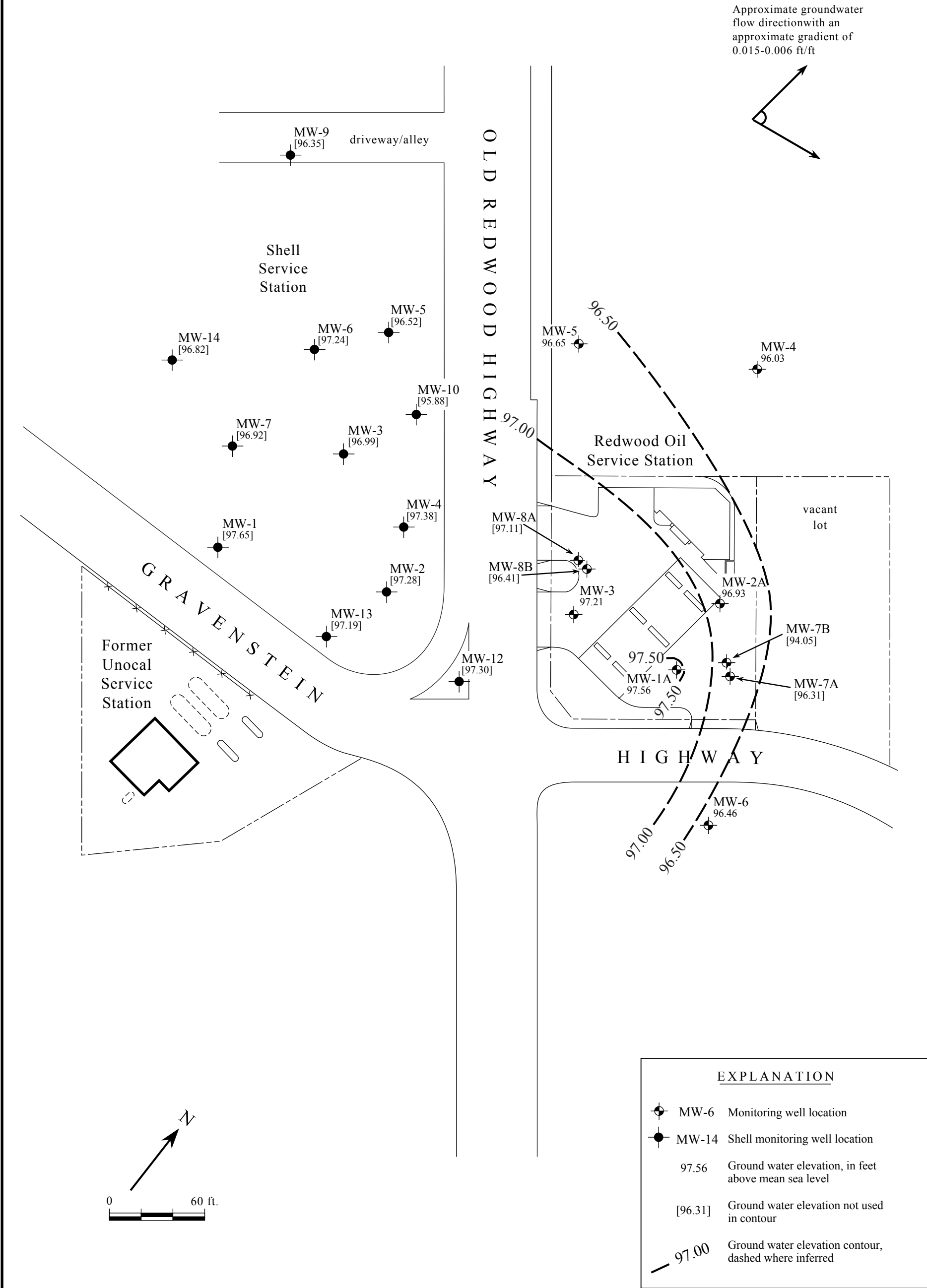


Figure 2. □Monitoring Well Locations and Ground Water Elevation Contour Map - August 11, 2005 - Redwood Oil Service Station #102, 7716 Old Redwood, Cotati, California

APPENDIX B

TABLES

Table 1. Water Level Data Well Construction Details - Redwood Oil Service Station #102 7716 Old Redwood Highway, Cotati, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-1	9/26/1991	15.89	101.59	85.70	0.00	10 - 25	8 - 25	0 - 8	
	12/19/1991	18.30		83.29	0.00				
	3/16/1992	7.61		93.98	0.00				
	6/24/1992	9.27		92.32	0.00				
	9/23/1992	14.16		87.43	0.00				
	12/18/1992	9.31		92.28	0.00				
	3/22/1993	4.60		96.99	0.00				
	6/22/1993	8.50		93.09	0.00				
	9/24/1993	10.65		90.94	0.00				
	12/28/1993	9.66		91.93	0.00				
	3/25/1994	8.16		93.43	0.00				
	6/20/1994	9.06		92.53	0.00				
	9/8/1994	10.35		91.24	0.00				
	12/12/1994	8.44		93.15	0.00				
	3/15/1995	3.95		97.64	0.00				
	7/6/1995	6.93		94.66	0.00				
	9/19/1995	9.39		92.20	0.00				
	12/20/1995	12.70		88.89	0.00				
	3/28/1996	6.39		95.20	0.00				
	6/24/1996	9.36		93.75	1.90				Note 1: GWE corrected for the presence of free phase hydrocarbons.
	9/26/1996	12.88		91.93	4.02				See Note 1
	12/31/1996	4.51		97.26	0.22				See Note 1
	3/18/1997	6.84		94.77	0.02				See Note 1
	6/30/1997	9.33		92.26	trace				
	9/26/1997	11.25		90.62	0.35				See Note 1
	12/10/1997	5.96		95.72	0.11				See Note 1
	3/9/1998	3.79		97.80	0.00				
	6/16/1998	7.00		94.59	0.00				
	9/14/1998	9.22		92.37	0.00				
	12/15/1998	7.30		94.32	0.04				See Note 1
	3/24/1999	5.65		95.94	0.00				
	6/11/1999	8.10		93.49	0.00				
	9/9/1999	—		—	---				Well damaged during UST removal.

Table 1. Water Level Data Well Construction Details - Redwood Oil Service Station #102 7716 Old Redwood Highway, Cotati, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-1A	3/26/2001	5.93	101.45	95.52	0.00	5 - 20	4 - 20	0 - 4	
	6/19/2001	6.75		94.70	0.00				
	9/7/2001	10.47		90.98	0.00				
	12/4/2001	6.41		95.04	0.00				
	2/26/2002	5.62	103.85	98.23	0.00				Monitoring well surveyed for EDF compliance, November 5, 2001.
	5/17/2002	6.52		97.33	0.00				
	8/29/2002	9.47		94.38	0.00				
	11/26/2002	7.07		96.78	0.00				
	2/20/2003	4.92		98.93	0.00				
	5/23/2003	6.76		97.09	0.00				
	8/20/2003	8.66		95.19	0.00				
	11/20/2003	7.15		96.70	0.00				
	2/23/2004	5.67		98.18	0.00				
	5/12/2004	6.02		97.83	0.00				
	8/23/2004	8.64		95.21	0.00				
	11/10/2004	6.80		97.05	0.00				
	2/22/2005	3.92		99.93	0.00				
	5/11/2005	4.75		99.10	0.00				
	8/11/2005	6.29		97.56	0.00				
MW-2	9/26/1991	15.90	101.59	85.69	0.00	10 - 25	8 - 25	0 - 8	
	12/19/1991	18.19		83.40	0.00				
	3/16/1992	7.91		93.68	0.00				
	6/24/1992	9.47		92.12	0.00				
	9/23/1992	14.41		87.18	0.00				
	12/18/1992	10.31		91.28	0.00				
	3/22/1993	6.48		95.11	0.00				
	6/22/1993	7.61		93.98	0.00				
	9/24/1993	10.82		90.77	0.00				
	12/28/1993	10.24		91.35	0.00				
	3/25/1994	7.85		93.74	0.00				
	6/20/1994	8.94		92.65	0.00				
	9/8/1994	10.62		90.97	0.00				

Table 1. Water Level Data Well Construction Details - Redwood Oil Service Station #102 7716 Old Redwood Highway, Cotati, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-2	12/12/1994	8.80	101.59	92.79	0.00	10 - 25	8 - 25	0 - 8	
	3/15/1995	4.07		97.52	0.00				
	7/6/1995	7.25		94.34	0.00				
	9/19/1995	9.30		92.29	0.00				
	12/20/1995	8.81		92.78	0.00				
	3/28/1996	6.34		95.25	0.00				
	6/24/1996	7.64		93.95	0.00				
	9/26/1996	13.07		91.50	3.72				See Note 1
	12/31/1996	5.79		95.95	0.19				See Note 1
	3/18/1997	7.14		94.56	0.14				See Note 1
	6/30/1997	9.85		92.43	0.86				See Note 1
	9/26/1997	11.83		90.66	1.12				See Note 1
	12/10/1997	7.71		94.30	0.52				See Note 1
	3/9/1998	4.88		96.71	0.00				
	6/16/1998	6.63		94.98	0.03				See Note 1
	9/14/1998	9.96		91.64	0.01				See Note 1
	12/15/1998	9.63		92.86	1.13				See Note 1
	3/24/1999	6.25		95.36	0.02				See Note 1
	6/11/1999	7.53		94.08	0.02				See Note 1
	9/9/1999	9.51		92.28	0.25				See Note 1
	3/21/2000	—		—	---				Well abandoned on January 24, 2000.
MW-2A	3/26/2001	7.17	102.00	94.83	0.00	5 - 20	4 - 20	0 - 4	
	6/19/2001	8.75		93.25	0.00				
	9/7/2001	7.04		94.96	0.00				
	12/4/2001	8.75		93.25	0.00				
	2/26/2002	6.10	104.40	98.30	0.00				Monitoring well surveyed for EDF compliance, November 5, 2001.
	5/17/2002	7.88		96.52	0.00				
	8/29/2002	6.85		97.55	0.00				
	11/26/2002	9.49		94.91	0.00				
	2/20/2003	5.85		98.55	0.00				
	5/23/2003	5.42		98.98	0.00				
	8/20/2003	6.84		97.56	0.00				

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Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-2A	11/20/2003	10.08	104.40	94.32	0.00	5 - 20	4 - 20	0 - 4	
	2/23/2004	3.74		100.66	0.00				
	5/12/2004	7.37		97.03	0.00				
	8/23/2004	6.89		97.51	0.00				
	11/10/2004	8.48		95.92	0.00				
	2/22/2005	5.57		98.83	0.00				
	5/11/2005	6.74		97.66	0.00				
	8/11/2005	7.47		96.93	0.00				
MW-3	9/26/1991	13.88	101.13	87.25	0.00	10 - 25	8 - 25	0 - 8	
	12/19/1991	16.04		85.09	0.00				
	3/16/1992	7.14		93.99	0.00				
	6/24/1992	8.25		92.88	0.00				
	9/23/1992	12.46		88.67	0.00				
	12/18/1992	9.25		91.88	0.00				
	3/22/1993	6.02		95.11	0.00				
	6/22/1993	7.00		94.13	0.00				
	9/24/1993	9.36		91.77	0.00				
	12/28/1993	8.99		92.14	0.00				
	3/25/1994	6.96		94.17	0.00				
	6/20/1994	7.83		93.30	0.00				
	9/8/1994	9.11		92.02	0.00				
	12/12/1994	7.75		93.38	0.00				
	3/15/1995	3.62		97.51	0.00				
	7/6/1995	6.63		94.50	0.00				
	9/19/1995	8.31		92.82	0.00				
	12/20/1995	7.70		93.43	0.00				
	3/28/1996	5.77		95.36	0.00				
	6/24/1996	6.81		94.32	0.00				
	9/26/1996	8.90		92.23	0.00				
	12/31/1996	5.16		95.97	0.00				
	3/18/1997	6.22		94.91	0.00				
	6/30/1997	8.01		93.12	0.00				
	9/26/1997	9.33		91.80	0.00				

Table 1. Water Level Data Well Construction Details - Redwood Oil Service Station #102 7716 Old Redwood Highway, Cotati, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-3	12/10/1997	6.64	101.13	94.49	0.00	10 - 25	8 - 25	0 - 8	
	3/9/1998	4.53		96.60	0.00				
	6/16/1998	6.74		94.39	0.00				
	9/14/1998	7.34		93.79	0.00				
	12/15/1998	5.60		95.53	0.00				
	3/24/1999	4.86	100.87	96.27	0.00				
	6/11/1999	6.50		94.63	0.00				
	9/9/1999	7.91		93.22	0.00				
	3/21/2000	5.58		95.55	0.00				
	10/2/2000	8.11	103.27	93.02	0.00				
	3/26/2001	5.80		95.07	0.00				Monitoring well surveyed for EDF compliance, November 5, 2001.
	6/19/2001	7.17		93.70	0.00				
	9/7/2001	8.80		92.07	0.00				
	12/4/2001	7.40		93.47	0.00				
	2/26/2002	4.97		98.30	0.00				
	5/17/2002	6.46		96.81	0.00				
	8/29/2002	7.95		95.32	0.00				
	11/26/2002	8.70		94.57	0.00				
	2/20/2003	4.79		98.48	0.00				
	5/23/2003	5.39		97.88	0.00				
	8/20/2003	7.35		95.92	0.00				
	11/20/2003	8.55		94.72	0.00				
	2/23/2004	4.20		99.07	0.00				
	5/12/2004	6.05		97.22	0.00				
	8/23/2004	7.34		95.93	0.00				
	11/10/2004	7.47		95.80	0.00				
	2/22/2005	4.31		98.96	0.00				
	5/11/2005	4.60		98.67	0.00				
	8/11/2005	6.06		97.21	0.00				
MW-4	5/4/2000	4.02	99.49	---	0.00	5 - 25	4 - 25	0 - 4	
	10/2/2000	8.18		---	0.00				
	3/26/2001	4.28		95.21	0.00				

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Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-4	6/19/2001	6.97	99.49	92.52	0.00	5 - 25	4 - 25	0 - 4	
	9/7/2001	9.51		89.98	0.00				
	12/4/2001	6.75		92.74	0.00				
	2/26/2002	3.45	101.89	98.44	0.00				Monitoring well surveyed for EDF compliance, November 5, 2001.
	5/17/2002	5.35		96.54	0.00				
	8/29/2002	8.41		93.48	0.00				
	11/26/2002	9.47		92.42	0.00				
	2/20/2003	3.65		98.24	0.00				
	5/23/2003	4.27		97.62	0.00				
	8/20/2003	7.40		94.49	0.00				
	11/20/2003	9.00		92.89	0.00				
	2/23/2004	2.32		99.57	0.00				
	5/12/2004	4.86		97.03	0.00				
	8/23/2004	7.34		94.55	0.00				
	11/10/2004	6.62		95.27	0.00				
	2/22/2005	1.37		100.52	0.00				
	5/11/2005	2.48		99.41	0.00				
	8/11/2005	5.86		96.03	0.00				
MW-5	11/26/2002	8.81	102.41	93.60	0.00	5 - 25	4 - 25	0 - 4	Monitoring well surveyed for EDF compliance, November 16, 2002.
	2/20/2003	3.45		98.96	0.00				
	5/23/2003	4.02		98.39	0.00				
	8/20/2003	—		—	---				Well inaccessible.
	11/20/2003	8.48		93.93	0.00				
	2/23/2004	2.88		99.53	0.00				
	5/12/2004	5.30		97.11	0.00				
	8/23/2004	7.20		95.21	0.00				
	11/10/2004	6.46		95.95	0.00				
	2/22/2005	2.84		99.57	0.00				
	5/11/2005	4.35		98.06	0.00				
	8/11/2005	5.76		96.65	0.00				

Table 1. Water Level Data Well Construction Details - Redwood Oil Service Station #102 7716 Old Redwood Highway, Cotati, California

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Product Thickness (ft)	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval	Notes
MW-6	11/26/2002	10.48	104.26	93.78	0.00	5 - 25	4 - 25	0 - 4	Monitoring well surveyed for EDF compliance, on November 16, 2002.
	2/20/2003	7.32		96.94	0.00				
	5/23/2003	7.65		96.61	0.00				
	8/20/2003	8.49		95.77	0.00				
	11/20/2003	9.88		94.38	0.00				
	2/23/2004	7.01		97.25	0.00				
	5/12/2004	7.90		96.36	0.00				
	8/23/2004	8.61		95.65	0.00				
	11/10/2004	8.85		95.41	0.00				
	2/22/2005	6.42		97.84	0.00				
	5/11/2005	7.64		96.62	0.00				
	8/11/2005	7.80		96.46	0.00				
MW-7A	4/27/2005	6.98	104.20	97.22	0.00	45 - 55	44 - 55	0 - 44	
	8/11/2005	7.89		96.31	0.00				
MW-7B	4/27/2005	9.32	104.27	94.95	0.00	67 - 77	66 - 77	0 - 66	
	8/11/2005	10.22		94.05	0.00				
MW-8A	4/27/2005	11.97	103.55	91.58	0.00	42 - 52	41 - 52	0 - 41	
	8/11/2005	6.44		97.11	0.00				
MW-8B	4/27/2005	8.69	103.70	95.01	0.00	62 - 72	61 - 73	0 - 61	
	8/11/2005	7.29		96.41	0.00				

Explanation:

DTW Depth to Water
ft feet
TOC Top of Casing
msl Mean Sea Level
GWE Ground Water Elevation

Table 2. Analytic Results for Ground Water - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

Well ID	Date Sampled	TPPH/TPH (G)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes
		<----- ppb ----->					
MW-1	9/26/1991	50,000	17,000	3,600	1,200	4,700	Analyzed for Or. Pb. No Or. Pb was detected.
	12/19/1991	34,000	17,000	4,000	2,500	4,400	
	3/16/1992	77,000	16,000	23,000	2,900	13,000	
	6/24/1992	78,000	19,000	19,000	3,100	12,000	
	9/23/1992	110,000	25,000	31,000	2,400	16,000	
	12/18/1992	68,000	7,700	8,300	480	7,000	
	3/22/1993	3,600	150	250	46	310	
	6/22/1993	75,000	12,000	11,000	2,500	10,000	
	9/24/1993	680	180	37	10	20	
	3/25/1994	89,000	13,000	12,000	1,600	5,800	
	9/8/1994	570,000	18,000	11,000	2,000	4,200	
	3/15/1995	85,000	12,000	17,000	2,000	9,400	Sample was flagged by lab. See laboratory analytical reports.
	9/19/1995	100,000	13,000	9,300	2,800	12,000	
	3/28/1996	---	---	---	---	---	Separate phase product present in well.
	9/26/1996	---	---	---	---	---	Separate phase product present in well.
	3/18/1997	---	---	---	---	---	Separate phase product present in well.
	9/26/1997	---	---	---	---	---	Separate phase product present in well.
	3/9/1998	270,000	15,000	32,000	4,100	20,000	
	9/14/1998	1,700,000	20,000	59,000	19,000	130,000	
	3/25/1999	210,000	24,000	35,000	5,900	42,000	Analyzed for HVOCs. HVOCs not detected
	9/9/1999	---	---	---	---	----	Well damaged during UST excavation. Well was abandoned on February 11, 2000.
MW-1A	3/26/2001	28,000	200	780	290	3,100	
	6/19/2001	3,300	38	10	67	20	
	9/7/2001	45,000	3,600	4,800	2,900	8,300	
	12/4/2001	4,500	240	<25	62	53	
	2/26/2002	<2,500	150	<25	<25	<25	
	5/17/2002	600	180	13	22	16	
	8/29/2002	29,000	1,800	1,200	1,900	2,600	Sample was flagged by lab. See laboratory analytical reports.
	11/26/2002	320	4	4	1	5	
	2/20/2003	<250	140	10	9	10	
	5/23/2003	13,000	690	380	860	1,000	
	8/20/2003	4,200	840	110	730	235	
	11/20/2003	980	170	12	22	15	

Table 2. Analytic Results for Ground Water - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

Well ID	Date Sampled	TPPH/TPH (G)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes
		<----- ppb ----->					
MW-1A	5/12/2004	160	<2.5	<2.5	<2.5	<5	
	11/10/2004	170	<2.5	<2.5	<2.5	<5	
	5/11/2005	260	9.0	25	14	25	
MW-2	9/26/1991	300	59	0.6	<0.5	4.1	Analyzed for oil & grease, Or. Pb and HVOCs. No O&G, Or. Pb, or HVOCs were detected.
	12/19/1991	2,400	1,200	46	11	47	
	3/16/1992	4,200	2,500	<0.5	100	45	
	6/24/1992	5,300	2,600	<0.5	120	53	
	9/23/1992	530	190	0.9	2.9	<0.5	
	12/18/1992	3,100	1,600	5	40	17	
	3/22/1993	1,400	1,100	2.1	24	5.6	
	6/22/1993	850	450	4.8	16	4.2	
	9/24/1993	68,000	14,000	11,000	2,300	8,400	
	3/25/1994	1,500	510	94	30	40	
	9/8/1994	1,400	400	130	26	45	
	3/15/1995	5,900	2,500	5,300	160	7,200	Sample was flagged by lab. See laboratory analytical reports.
	9/19/1995	12,000	2,800	150	130	520	
	3/28/1996	24,000	3,000	3,400	490	2,100	
	9/26/1996	---	---	---	---	---	Separate phase product present in well.
	3/18/1997	---	---	---	---	---	Separate phase product present in well.
	9/26/1997	---	---	---	---	---	Separate phase product present in well.
	3/9/1998	73,000	7,300	5,400	770	3,100	
	9/14/1998	---	---	---	---	---	Separate phase product present in well.
	3/25/1999	---	---	---	---	---	Separate phase product present in well.
	9/9/1999	---	---	---	---	---	Separate phase product present in well. Well MW-2 was abandoned on January 24, 2000.
MW-2A	3/26/2001	110,000	8,000	30,000	2,900	17,000	
	6/19/2001	80,000	4,100	16,000	3,400	15,000	
	9/7/2001	1,800	35	14	16	32	
	12/4/2001	29,000	2,400	2,800	2,300	3,400	
	2/26/2002	60,000	3,700	6,800	3,100	7,300	
	5/17/2002	39,000	2,400	4,200	2,900	5,300	

Table 2. Analytic Results for Ground Water - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

Well ID	Date Sampled	TPPH/TPH (G)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes
		<----- ppb ----->					
MW-2A	8/29/2002	2,500	190	16	21	<25	Sample was flagged by lab. See laboratory analytical reports.
	11/26/2002	8,400	600	170	1,200	561	
	2/20/2003	9,200	760	930	1,300	1,810	
	5/23/2003	1,100	57	9	9	9	
	8/20/2003	140	2	<1	<1	1	
	11/20/2003	9,900	630	110	990	290	
	5/12/2004	5,900	160	59	350	260	
	11/10/2004	11,000	630	350	930	1000	
	5/11/2005	5,400	160	150	380	460	
MW-3	9/26/1991	510	52	5.5	1.8	17	Analyzed for Or. Pb. No Or. Pb was detected.
	12/19/1991	9,400	3,700	310	140	280	
	3/16/1992	8,200	4,400	320	240	720	
	6/24/1992	21,000	11,000	770	730	2,500	
	9/23/1992	22,000	9,100	920	720	1,900	
	12/18/1992	9,600	2,600	73	180	130	
	3/22/1993	62,000	35,000	3,900	2,300	12,000	
	6/22/1993	32,000	13,000	940	1,100	3,800	
	9/24/1993	13,000	5,500	240	420	1,300	
	3/25/1994	24,000	11,000	530	610	2,300	
	9/8/1994	22,000	7,700	170	590	1,600	
	3/15/1995	110,000	33,000	2,800	2,000	8,000	Sample was flagged by lab. See laboratory analytical reports.
	9/19/1995	300,000	19,000	590	1,300	3,200	
	3/28/1996	55,000	19,000	420	1,600	3,000	
	9/26/1996	25,000	7,200	26	480	340	
	3/18/1997	36,000	14,000	240	950	1,000	
	9/26/1997	28,000	11,000	42	810	570	
	3/9/1998	71,000	28,000	580	1,800	3,200	
	9/14/1998	49,000	27,000	400	<100	1,700	
	3/25/1999	85,000	25,000	370	2,300	2,800	Samples were analyzed for HVOCs. HVOCs were not detected
	9/9/1999	53,000	29,000	<250	2,000	870	
	3/21/2000	160,000	12,000	<50	2,000	1,700	
	10/2/2000	100,000	31,000	<50	1,600	1,300	
		3/26/2001	51,000	22,000	55	540	130

Table 2. Analytic Results for Ground Water - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

Well ID	Date Sampled	TPPH/TPH (G)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes
		<----- ppb ----->					
MW-3	6/19/2001	73,000	27,000	<250	1,600	730	
	9/7/2001	53,000	17,000	<250	1,200	<250	
	12/4/2001	170,000	34,000	<1,250	2,900	<1,250	
	2/26/2002	96,000	30,000	<500	1,700	<500	
	5/17/2002	48,000	29,000	<100	2,600	670	
	8/29/2002	93,000	44,000	<500	2,500	<1,000	Sample was flagged by lab. See laboratory analytical reports.
	11/26/2002	61,000	40,000	94	3,900	960	
	2/20/2003	36,000	24,000	67	1,500	137	
	5/23/2003	52,000	23,000	53	2,200	316	
	8/20/2003	33,000	24,000	38	1,100	110	
	11/20/2003	86,000	22,000	<500	2,000	<1,000	
	5/12/2004	59,000	26,000	<250	2,400	<500	
	11/10/2004	42,000	24,000	<200	690	<400	
5/11/2005	42,000	25,000	<250	970	<250	TPH(G) value is tesult of MTBE and Benzene within TPH(G) range.	
MW-4	5/4/2000	<50	<0.5	<0.5	<0.5	<0.5	
	10/2/2000	<50	<0.5	<0.5	<0.5	<0.5	
	3/26/2001	<50	<0.5	<0.5	<0.5	<0.5	
	6/19/2001	<50	<0.5	0.84	<0.5	<0.5	
	2/26/2002	<50	2.7	0.83	0.58	0.57	
	5/24/2002	52	5.4	6.8	2	7.1	
	8/29/2002	78	9.1	5.9	1.5	6.5	
	11/26/2002	<50	3	5	1	5	
	2/20/2003	<50	8	10	1	8	
	5/23/2003	170	3	5	<1	2	
	8/20/2003	<50	4	<1	<1	1	
	11/20/2003	64	3.9	9.8	1.4	7.2	
	5/12/2004	<25	<0.5	<0.5	<0.5	<1	
	11/10/2004	<25	<0.5	0.62	<0.5	<1	
	5/11/2005	82	3.7	23	3.6	22	

Table 2. Analytic Results for Ground Water - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

Well ID	Date Sampled	TPPH/TPH (G)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes
		<----- ppb ----->					
MW-5	11/26/2002	50	4	6	1	7	
	2/20/2003	52	15	14	2	11	
	5/23/2003	75	3	5	<1	2	
	8/20/2003	—	—	—	—	---	
	11/20/2003	120	19	11	5.3	8.9	
	2/23/2004	120	6.5	16	2.2	15	
	5/12/2004	<25	<0.5	<0.5	<0.5	<1	
	8/23/2004	<25	<0.5	<0.5	<0.5	<1	
	11/10/2004	<25	<0.5	0.57	<0.5	<1	
	2/22/2005	<50	0.5	<0.5	<0.5	<0.5	
	5/11/2005	90	4.9	30	4.2	26	
	8/11/2005	130	5.9	22	3.3	26	
MW-6	11/26/2002	76	8	10	2	9	
	2/20/2003	80	29	25	3	17	
	5/23/2003	140	8	10	<1	5	
	8/20/2003	<50	5	1	<1	2	
	11/20/2003	140	13	22	2.4	13	
	2/23/2004	180	13	26	3.2	21	
	5/12/2004	<25	<0.5	<0.5	<0.5	<1	
	8/23/2004	<25	<0.5	<0.5	<0.5	<1	
	11/10/2004	<25	<0.5	0.74	<0.5	<1	
	2/22/2005	<50	0.88	<0.5	<0.5	<0.5	
	5/11/2005	150	12	57	6.5	38	
	8/11/2005	200	11	33	4.6	36	

Table 2. Analytic Results for Ground Water - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California

Well ID	Date Sampled	TPPH/TPH (G)	Benzene	Toluene	Ethyl benzene	Xylenes	Notes
		<----- ppb ----->					
MW-7A	4/27/2005	39,000	<250	<250	<250	<250	
	8/11/2005	<50,000	<500	<500	<500	<500	Detetion limits raised due to the high concentration of MTBE
MW-7B	4/27/2005	28	0.87	1.4	2.1	8.9	
	8/11/2005	200	8.4	30	4.6	36	
MW-8A	4/27/2005	320	7.1	4.7	18	70	
	8/11/2005	600	25	47	28	130	
MW-8B	4/27/2005	38	2.1	7.6	1.5	8.9	
	8/11/2005	180	7.6	26	4.3	34	

Explanation:

TPPH/ TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline/ Total Petroleum Hydrocarbons as Gasoline

ppb = parts per billion

--- = Not analyzed/Not applicable

Table 3. Analytical Results for Ground Water - Oxygenates - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
<-----ppb----->							
MW-1	9/14/1998	<250	320,000	<250	<250	<50	
	3/25/1999	---	320,000	---	---	---	
	9/9/1999	---	---	---	---	---	Separate phase product present in well.
MW-1A	3/26/2001	800	1,400	<5.0	<5.0	<5.0	
	6/19/2001	<1,000	6,600	<250	<250	<250	
	9/7/2001	<2,000	6,400	<500	<500	<500	
	12/4/2001	<1,000	4,300	<250	<250	<250	
	2/26/2002	<2,000	3,400	<500	<500	<500	
	5/17/2002	<2,000	3,100	<10	<10	<10	
	8/29/2002	<1,000	4,600	<250	<250	<250	
	11/26/2002	300	4,700	<1	<1	18	
	2/20/2003	<200	1,700	<1	<1	5	
	5/23/2003	<200	850	<1	<1	2	
	8/20/2003	670	1,300	<1	<1	4	
	11/20/2003	1,400	120	<25	<25	<25	
	5/12/2004	1,200	8.2	<25	<25	<25	
	11/10/2004	1,300	8.5	<25	<25	<25	
	5/11/2005	1,200	14	<25	<25	<25	
MW-2	9/9/1999	---	---	---	---	---	Separate phase product present in well.
MW-2A	3/26/2001	1,500	2,800	<500	<500	<500	
	6/19/2001	<1,000	4,200	<250	<250	<250	
	9/7/2001	<2,000	5,000	<500	<500	<500	
	12/4/2001	<400	3,100	<100	<100	<100	
	2/26/2002	300	2,600	<50	<50	<50	
	5/17/2002	<2,000	2,200	<10	<10	<10	
	8/29/2002	<1,000	4,600	<250	<250	<250	
	11/26/2002	210	2,000	<1	<1	6	
	2/20/2003	<200	790	<1	<1	2	
	5/23/2003	240	1,800	<1	<1	5	

Table 3. Analytical Results for Ground Water - Oxygenates - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
		-----ppb----->					
MW-2A cont.	8/20/2003	760	2,100	<1	<1	7	
	11/20/2003	660	270	<50	<50	<50	
	5/12/2004	<200	77	<100	<100	<100	
	11/10/2004	820	51	<100	<100	<100	
	5/11/2005	260	31	<100	<100	<100	
MW-3	9/14/1998	<5	<1	<5	<5	<1	
	3/25/1999	---	120,000	---	---	---	
	9/9/1999	---	74,000	---	---	---	
	3/21/2000	---	33,000	---	---	---	
	10/2/2000	---	75,000	---	---	---	
	3/26/2001	3,900	28,000	<500	<500	<500	
	6/19/2001	<10,000	60,000	<2,500	<2,500	<2,500	
	9/7/2001	<10,000	47,000	<2,500	<2,500	<2,500	
	12/4/2001	<10,000	47,000	<2,500	<2,500	<2,500	
	2/26/2002	<10,000	41,000	<2,500	<2,500	<2,500	
	5/17/2002	<20,000	30,000	<100	<100	<100	
	8/29/2002	<10,000	33,000	<2,500	<2,500	<2,500	
	11/26/2002	990	34,000	<1	<1	120	
	2/20/2003	1,200	27,000	<1	<1	110	
	5/23/2003	3,400	23,000	<1	<1	83	
	8/20/2003	12,000	49,000	<10	<10	110	
	11/20/03	<4,000	18,000	<2,000	<2,000	<2,000	
	5/12/2004	5,200	40,000	<2,500	<2,500	<2,500	
	11/10/2004	5,000	12,000	<2,000	<2,000	<2,000	
	5/11/2005	9,000	28,000	<2,500	<2,500	<2,500	
MW-4	5/4/2000	---	<2.0	---	---	---	
	10/2/2000	---	<0.5	---	---	---	
	3/26/2001	<10.0	<2.0	<5.0	<5.0	<5.0	
	6/19/2001	<20	<5.0	<5.0	<5.0	<5.0	

Table 3. Analytical Results for Ground Water - Oxygenates - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
<-----ppb----->							
MW-4 cont.	2/26/2002	<20	5.3	<5	<5	<5	
	5/24/2002	<20	<5	<5	<5	<5	
	8/29/2002	<20	38	<5	<5	<5	
	11/26/2002	<200	37	<1	<1	<1	
	2/20/2003	<200	<1	<1	<1	<1	
	5/23/2003	<200	<1	<1	<1	<1	
	8/20/2003	<200	<1	<1	<1	<1	
	11/20/2003	<10	1.6	<5	<5	<5	
	5/12/2004	<10	<1	<5	<5	<5	
	11/10/2004	<10	<1	<5	<5	<5	
	5/11/2005	<10	<1	<5	<5	<5	
MW-5	11/26/2002	<200	1	<1	<1	<1	
	2/20/2003	<200	<1	<1	<1	<1	
	5/23/2003	<200	<1	<1	<1	<1	
	8/20/2003	—	—	—	—	---	
	11/20/2003	<10	<1	<5	<5	<5	
	2/23/2004	<10	1.4	<5	<5	<5	
	5/12/2004	<10	1.2	<5	<5	<5	
	8/23/2004	<10	<1	<5	<5	<5	
	11/10/2004	<10	<1	<5	<5	<5	
	2/22/2005	<10	<1	<5	<5	<5	
	5/11/2005	<10	1.1	<5	<5	<5	
	8/11/2005	<10	<1.0	<5.0	<5.0	<5.0	
MW-6	11/26/2002	<200	<1	<1	<1	<1	
	2/20/2003	<200	<1	<1	<1	<1	
	5/23/2003	<200	<1	<1	<1	<1	
	8/20/2003	<200	<1	<1	<1	<1	
	11/20/2003	<10	4.2	<5	<5	<5	
	2/23/2004	<10	5.8	<5	<5	<5	

Table 3. Analytical Results for Ground Water - Oxygenates - Redwood Oil Service Station #102, 7716 Old Redwood Highway, Cotati, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
<-----ppb----->							
MW-6	5/12/2004	<10	<1	<5	<5	<5	
	8/23/2004	<10	<1	<5	<5	<5	
	11/10/2004	<10	<1	<5	<5	<5	
	2/22/2005	<10	<1	<5	<5	<5	
	5/11/2005	<20	<2	<10	<10	<10	
	8/11/2005	<10	<1.0	<5.0	<5.0	<5.0	
MW-7A	4/27/2005	<5,000	24,000	<2500	<2,500	<2,500	
	8/11/2005	<10,000	29,000	<5,000	<5,000	<5,000	
MW-7B	4/27/2005	<10	12	<5	<5	<5	
	8/11/2005	<10	23	<5.0	<5.0	<5.0	
MW-8A	4/27/2005	<10	2.1	<5	<5	<5	
	8/11/2005	<10	13	<5.0	<5.0	<5.0	
MW-8B	4/27/2005	<10	1.3	<5	<5	<5	
	8/11/2005	<10	8.6	<5.0	<5.0	<5.0	

Explanation:

MTBE = Methyl tertiary-butyl ether

--- = Not analyzed/Not detected

Table 4. Monitoring Well Survey Data and Depth to Ground Water - 7675 Old Redwood Highway, Cotati, California (Shell Station-Cambria Environmental site).

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Notes
MW-1	2/26/2002	4.71	104.20	99.49	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	6.20		98.00	
	8/28/2002	9.52		94.68	
	2/20/2003	5.64		98.56	
	8/20/2003	8.70		95.50	
	11/20/2003	9.13		95.07	
	2/23/2004	4.87		99.33	
	5/12/2004	---		---	
	8/9/2004	8.73		95.47	
	8/23/2004	---		---	
	11/10/2004	8.37		95.83	
	2/23/2005	5.45		98.75	
	5/11/2005	4.70		99.50	
	8/22/2005	6.55		97.65	
MW-2	2/26/2002	4.52	104.42	99.90	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	7.24		97.18	
	8/28/2002	9.06		95.36	
	2/20/2003	4.76		99.66	
	8/20/2003	8.49		95.93	
	11/20/2003	9.32		95.10	
	2/23/2004	4.45		99.97	
	5/12/2004	---		---	
	8/9/2004	7.41		97.01	
	8/23/2004	---		---	
	11/10/2004	8.08		96.34	
	2/23/2005	5.04		99.38	
	5/11/2005	4.75		99.67	
	8/22/2005	7.14		97.28	
MW-3	2/26/2002	3.80	103.81	100.01	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	6.45		97.36	
	8/28/2002	8.42		95.39	
	2/20/2003	3.92		99.89	
	8/20/2003	7.80		96.01	
	11/20/2003	8.71		95.10	

Table 4. Monitoring Well Survey Data and Depth to Ground Water - 7675 Old Redwood Highway, Cotati, California (Shell Station-Cambria Environmental site).

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Notes	
MW-3	2/23/2004	4.52	103.81	99.29	Joint ground water sampling did not take place for this quarter.	
	5/12/2004	---				
	8/9/2004	7.98				
	8/23/2004	---				
	11/10/2004	7.47				
	2/23/2005	3.22				
	5/11/2005	3.68				
	8/22/2005	6.82				
	96.99					
MW-4	2/26/2002	3.14	103.60	100.46	TOC elevations surveyed and tied into ECM wells for EDF compliance.	
	5/17/2002	6.25		97.35		
	8/28/2002	8.05		95.55		
	2/20/2003	3.26		100.34		
	8/20/2003	7.54		96.06		
	11/20/2003	8.61		94.99		
	2/23/2004	2.82		100.78		
	5/12/2004	---		---		Joint ground water sampling did not take place for this quarter.
	8/9/2004	7.48		96.12		
	8/23/2004	---		---		
	11/10/2004	7.00		96.60		
	2/23/2005	2.73		100.87		
	5/11/2005	2.87		100.73		
	8/22/2005	6.22		97.38		
MW-5	2/26/2002	3.06	102.16	99.10	TOC elevations surveyed and tied into ECM wells for EDF compliance.	
	5/17/2002	5.00		97.16		
	8/28/2002	7.51		94.65		
	2/20/2003	3.99		98.17		
	8/20/2003	6.92		95.24		
	11/20/2003	8.14		94.02		
	2/23/2004	3.75		98.41		
	5/12/2004	---		---		Joint ground water sampling did not take place for this quarter.
	8/9/2004	6.79		95.37		
	8/23/2004	---		---		
	11/10/2004	6.32		95.84		
	2/23/2005	3.53		98.63		

Table 4. Monitoring Well Survey Data and Depth to Ground Water - 7675 Old Redwood Highway, Cotati, California (Shell Station-Cambria Environmental site).

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Notes
MW-5 cont	5/11/2005	3.40		98.76	
	8/22/2005	5.64		96.52	
MW-6	2/26/2002	4.05	103.10	99.05	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	4.60		98.50	
	8/28/2002	8.25		94.85	
	2/20/2003	5.79		97.31	
	8/20/2003	7.59		95.51	
	11/20/2003	9.06		94.04	
	2/23/2004	3.96		99.14	
	5/12/2004	---		---	Joint ground water sampling did not take place for this quarter.
	8/9/2004	7.56		95.54	
	8/23/2004	---		---	
	11/10/2004	7.41		95.69	
	2/23/2005	4.45		98.65	
	5/11/2005	4.25		98.85	
	8/22/2005	5.86		97.24	
MW-7	2/26/2002	4.89	104.29	99.40	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	7.15		97.14	
	8/28/2002	9.62		94.67	
	2/20/2003	5.05		99.24	
	8/20/2003	8.81		95.48	
	11/20/2003	9.96		94.33	
	2/23/2004	4.26		100.03	
	5/12/2004	---		---	Joint ground water sampling did not take place for this quarter.
	8/9/2004	8.85		95.44	
	8/23/2004	---		---	
	11/10/2004	8.67		95.62	
	2/23/2005	4.35		99.94	
	5/11/2005	4.77		99.52	
	8/22/2005	7.37		96.92	

Table 4. Monitoring Well Survey Data and Depth to Ground Water - 7675 Old Redwood Highway, Cotati, California (Shell Station-Cambria Environmental site).

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Notes
MW-9	2/26/2002	3.95	103.02	99.07	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/02	6.94		96.08	
	8/28/2002	8.49		94.53	
	2/20/2003	4.25		98.77	
	8/20/2003	7.79		95.23	
	11/20/2003	9.00		94.02	
	2/23/2004	3.61		99.41	
	5/12/2004	---		---	
	8/9/2004	7.73		95.29	
	8/23/2004	---		---	
	11/10/2004	7.46		95.56	
	2/23/2005	4.05		98.67	
	5/11/2005	3.90		99.12	
	8/22/2005	6.67		96.35	
MW-10	2/26/2002	3.98	103.45	99.47	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	5.92		97.53	
	8/28/2002	7.36		96.09	
	2/20/2003	4.09		99.36	
	8/20/2003	7.50		95.95	
	11/20/2003	8.86		94.59	
	2/23/2004	3.50		99.95	
	5/12/2004	---		---	
	8/9/2004	8.47		94.98	
	8/23/2004	---		---	
	11/10/2004	7.93		95.52	
	2/23/2005	4.47		98.98	
	5/11/2005	4.86		98.59	
	8/22/2005	7.57		95.88	

Table 4. Monitoring Well Survey Data and Depth to Ground Water - 7675 Old Redwood Highway, Cotati, California (Shell Station-Cambria Environmental site).

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Notes
MW-12	2/26/2002	5.69	104.38	98.69	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	7.30		97.08	
	8/28/2002	9.37		95.01	
	2/20/2003	6.59		97.79	
	8/20/2003	8.57		95.81	
	11/20/2003	10.07		94.31	
	2/23/2004	6.09	104.38	98.29	Joint ground water sampling did not take place for this quarter.
	5/12/2004	---		---	
	8/9/2004	8.31		96.07	
	8/23/2004	---		---	
	11/10/2004	8.50		95.88	
	2/23/2005	6.56		97.82	
	5/11/2005	5.51		98.87	
	8/22/2005	7.08		97.30	
MW-13	2/26/2002	6.45	106.07	99.62	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	8.93		97.14	
	8/28/2002	10.82		95.25	
	2/20/2003	6.98		99.09	
	8/20/2003	10.32		95.75	
	11/20/2003	11.18		94.89	
	2/23/2004	5.81		100.26	
	5/12/2004	---		---	
	8/9/2004	10.30		95.77	
	8/23/2004	---		---	
	11/10/2004	9.97		96.10	
	2/23/2005	5.75		100.32	
	5/11/2005	6.24		99.83	
	8/22/2005	8.88		97.19	

Table 4. Monitoring Well Survey Data and Depth to Ground Water - 7675 Old Redwood Highway, Cotati, California (Shell Station-Cambria Environmental site).

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Notes
MW-14	2/26/2002	4.63	103.48	98.85	TOC elevations surveyed and tied into ECM wells for EDF compliance.
	5/17/2002	6.46		97.02	
	8/28/2002	8.82		94.66	
	2/20/2003	4.35		99.13	
	8/20/2003	8.06		95.42	
	11/20/2003	9.24		94.24	
	2/23/2004	3.60		99.88	
	5/12/2004	---		---	Joint ground water sampling did not take place for this quarter.
	8/9/2004	8.08		95.40	
	8/23/2004	---		---	
	11/10/2004	8.00		95.48	
	2/23/2005	3.62		99.86	
	5/11/2005	4.07		99.41	
	8/22/2005	6.66		96.82	

Explanation:

DTW = Depth to Water

ft = feet

TOC = Top of Casing

GWE = Ground Water Elevation

msl = Mean Sea Level

Notes:

Data received from Shell Stations environmental consultants, Cambria Environmental.

APPENDIX C

CHAIN OF CUSTODY
AND
LABORATORY ANALYTICAL REPORTS

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jim Green
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 44831 - 8/19/2005 3:50:27 PM

Order Number: 44831
Project Name: Cotati
Project Number: 98-516-14

Date Received: 08/12/2005
P.O. Number: 98-516-14
Global ID: T0609700248

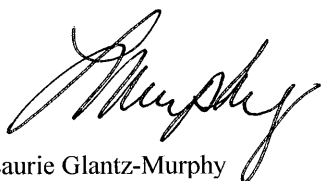
Certificate of Analysis - Final Report

On August 12, 2005, samples were received under chain of custody for analysis.
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Liquid	EDF EPA 8260B EPA 624 TPH as Gasoline - GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Jim Green

Date Received: 8/12/2005
Project ID: 98-516-14
GlobalID: T0609700248
P.O. Number: 98-516-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 44831-001 Sample ID: MW-5 Matrix: Liquid Sample Date: 8/11/2005 11:40 AM

EPA 5030C EPA 8260B EPA 624			8260Petroleum							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	5.9		1	0.50	µg/L	N/A	N/A	8/15/2005	WM1050815	
Toluene	22		1	0.50	µg/L	N/A	N/A	8/15/2005	WM1050815	
Ethyl Benzene	3.3		1	0.50	µg/L	N/A	N/A	8/15/2005	WM1050815	
Xylenes, Total	26		1	0.50	µg/L	N/A	N/A	8/15/2005	WM1050815	
Methyl-t-butyl Ether	ND		1	1.0	µg/L	N/A	N/A	8/15/2005	WM1050815	
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/15/2005	WM1050815	
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	8/15/2005	WM1050815	
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/15/2005	WM1050815	
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/15/2005	WM1050815	

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	104	70	- 125
Dibromofluoromethane	114	70	- 125
Toluene-d8	102	70	- 125

Analyzed by: MTu
Reviewed by: ECunniffe

EPA 5030C GC-MS								TPH as Gasoline - GC-MS	
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	130		1	50	µg/L	N/A	N/A	8/15/2005	WM1050815
Surrogate	Surrogate Recovery		Control Limits (%)					Analyzed by: MTu	
4-Bromofluorobenzene	111		70	-	125			Reviewed by: ECunniffe	
Dibromofluoromethane	104		70	-	125				
Toluene-d8	99.8		70	-	125				

Analyzed by: MTu
Reviewed by: ECunniffe

Entech Analytical Labs, Inc.

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ECM Group
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Attn: Jim Green

Date Received: 8/12/2005
Project ID: 98-516-14
GlobalID: T0609700248
P.O. Number: 98-516-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 44831-002 Sample ID: MW-6 Matrix: Liquid Sample Date: 8/11/2005 11:20 AM

EPA 5030C			EPA 8260B			EPA 624			8260Petroleum		
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch		
Benzene	11		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817		
Toluene	33		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817		
Ethyl Benzene	4.6		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817		
Xylenes, Total	36		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817		
Methyl-t-butyl Ether	ND		1	1.0	µg/L	N/A	N/A	8/17/2005	WM1050817		
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/17/2005	WM1050817		
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	8/17/2005	WM1050817		
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/17/2005	WM1050817		
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/17/2005	WM1050817		

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	106	70	- 125
Dibromofluoromethane	111	70	- 125
Toluene-d8	102	70	- 125

Analyzed by: MTu
Reviewed by: ECunniffe

EPA 5030C GC-MS								TPH as Gasoline - GC-MS	
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	200		1	50	µg/L	N/A	N/A	8/17/2005	WM1050817

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	112	70	- 125
Dibromofluoromethane	102	70	- 125
Toluene-d8	99.4	70	- 125

Analyzed by: MTu
Reviewed by: ECunniffe

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Date Received: 8/12/2005
Project ID: 98-516-14
GlobalID: T0609700248
P.O. Number: 98-516-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 44831-003 Sample ID: MW-7A

Matrix: Liquid Sample Date: 8/11/2005 12:40 PM

EPA 5030C EPA 8260B EPA 624			8260Petroleum							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	ND		1000	500	µg/L	N/A	N/A	8/17/2005	WM1050817	
Toluene	ND		1000	500	µg/L	N/A	N/A	8/17/2005	WM1050817	
Ethyl Benzene	ND		1000	500	µg/L	N/A	N/A	8/17/2005	WM1050817	
Xylenes, Total	ND		1000	500	µg/L	N/A	N/A	8/17/2005	WM1050817	
Methyl-t-butyl Ether	29000		1000	1000	µg/L	N/A	N/A	8/17/2005	WM1050817	
tert-Butyl Ethyl Ether	ND		1000	5000	µg/L	N/A	N/A	8/17/2005	WM1050817	
tert-Butanol (TBA)	ND		1000	10000	µg/L	N/A	N/A	8/17/2005	WM1050817	
Diisopropyl Ether	ND		1000	5000	µg/L	N/A	N/A	8/17/2005	WM1050817	
tert-Amyl Methyl Ether	ND		1000	5000	µg/L	N/A	N/A	8/17/2005	WM1050817	

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	105	70	- 125
Dibromofluoromethane	115	70	- 125
Toluene-d8	104	70	- 125

Analyzed by: MTu
Reviewed by: ECunniffe

EPA 5030C GC-MS		TPH as Gasoline - GC-MS							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1000	50000	µg/L	N/A	N/A	8/17/2005	WM1050817

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	112	70	- 125
Dibromofluoromethane	105	70	- 125
Toluene-d8	102	70	- 125

Analyzed by: MTu
Reviewed by: ECunniffe

Entech Analytical Labs, Inc.

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Date Received: 8/12/2005
Project ID: 98-516-14
GlobalID: T0609700248
P.O. Number: 98-516-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 44831-004 Sample ID: MW-7B

Matrix: Liquid Sample Date: 8/11/2005 12:15 PM

EPA 5030C EPA 8260B EPA 624			8260Petroleum							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	8.4		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817	
Toluene	30		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817	
Ethyl Benzene	4.6		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817	
Xylenes, Total	36		1	0.50	µg/L	N/A	N/A	8/17/2005	WM1050817	
Methyl-t-butyl Ether	23		1	1.0	µg/L	N/A	N/A	8/17/2005	WM1050817	
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/17/2005	WM1050817	
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	8/17/2005	WM1050817	
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/17/2005	WM1050817	
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/17/2005	WM1050817	

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	104	70	- 125
Dibromofluoromethane	112	70	- 125
Toluene-d8	103	70	- 125

Analyzed by: MTu
Reviewed by: ECunniffe

EPA 5030C GC-MS		TPH as Gasoline - GC-MS							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	200		1	50	µg/L	N/A	N/A	8/17/2005	WM1050817
Surrogate	Surrogate Recovery	Control Limits (%)							
4-Bromofluorobenzene	111	70	- 125						
Dibromofluoromethane	103	70	- 125						
Toluene-d8	101	70	- 125						

Analyzed by: MTu
Reviewed by: ECunniffe

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Date Received: 8/12/2005
Project ID: 98-516-14
GlobalID: T0609700248
P.O. Number: 98-516-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 44831-005 Sample ID: MW-8A

Matrix: Liquid Sample Date: 8/11/2005 1:50 PM

EPA 5030C EPA 8260B EPA 624										8260Petroleum
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	25		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Toluene	47		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Ethyl Benzene	28		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Xylenes, Total	130		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Methyl-t-butyl Ether	13		1	1.0	µg/L	N/A	N/A	8/16/2005	WM1050816	
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/16/2005	WM1050816	
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	8/16/2005	WM1050816	
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/16/2005	WM1050816	
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/16/2005	WM1050816	

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	108	70	- 125
Dibromofluoromethane	115	70	- 125
Toluene-d8	105	70	- 125

Analyzed by: MTu

Reviewed by: ECunniffe

EPA 5030C GC-MS										TPH as Gasoline - GC-MS
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
TPH as Gasoline	600		5	250	µg/L	N/A	N/A	8/17/2005	WM1050816	

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	111	70	- 125
Dibromofluoromethane	101	70	- 125
Toluene-d8	101	70	- 125

Analyzed by: MTu

Reviewed by: ECunniffe

Entech Analytical Labs, Inc.

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ECM Group
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Benicia, CA 94510
Attn: Jim Green

Date Received: 8/12/2005
Project ID: 98-516-14
GlobalID: T0609700248
P.O. Number: 98-516-14
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 44831-006 Sample ID: MW-8B

Matrix: Liquid Sample Date: 8/11/2005 1:10 PM

EPA 5030C EPA 8260B EPA 624			8260Petroleum							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	7.6		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Toluene	26		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Ethyl Benzene	4.3		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Xylenes, Total	34		1	0.50	µg/L	N/A	N/A	8/16/2005	WM1050816	
Methyl-t-butyl Ether	8.6		1	1.0	µg/L	N/A	N/A	8/16/2005	WM1050816	
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/16/2005	WM1050816	
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	8/16/2005	WM1050816	
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/16/2005	WM1050816	
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	8/16/2005	WM1050816	

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	104	70	- 125
Dibromofluoromethane	114	70	- 125
Toluene-d8	104	70	- 125

Analyzed by: MTu

Reviewed by: ECunniffe

EPA 5030C GC-MS		TPH as Gasoline - GC-MS							
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	180		1	50	µg/L	N/A	N/A	8/16/2005	WM1050816

Surrogate	Surrogate Recovery	Control Limits (%)	
4-Bromofluorobenzene	110	70	- 125
Dibromofluoromethane	105	70	- 125
Toluene-d8	101	70	- 125

Analyzed by: MTu

Reviewed by: ECunniffe

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050815

Validated by: ECunniffe - 08/18/05

QC Batch Analysis Date: 8/15/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	105	70 - 125
Dibromofluoromethane	113	70 - 125
Toluene-d8	104	70 - 125

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050815

Validated by: ECunniffe - 08/18/05

QC Batch Analysis Date: 8/15/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	111	70 - 125
Dibromofluoromethane	104	70 - 125
Toluene-d8	101	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050815

Reviewed by: ECunniffe - 08/18/05

QC Batch ID Analysis Date: 8/15/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	24.3	µg/L	122	70 - 130
Benzene	<0.50	20	22.6	µg/L	113	70 - 130
Chlorobenzene	<0.50	20	23.4	µg/L	117	70 - 130
Methyl-t-butyl Ether	<1.0	20	25.9	µg/L	130	70 - 130
Toluene	<0.50	20	23.4	µg/L	117	70 - 130
Trichloroethene	<0.50	20	21.6	µg/L	108	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	70 - 125
Dibromofluoromethane	109	70 - 125
Toluene-d8	97.8	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	23.6	µg/L	118	2.9	25.0	70 - 130
Benzene	<0.50	20	22.8	µg/L	114	0.88	25.0	70 - 130
Chlorobenzene	<0.50	20	23.1	µg/L	116	1.3	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	26.0	µg/L	130	0.39	25.0	70 - 130
Toluene	<0.50	20	23.3	µg/L	116	0.43	25.0	70 - 130
Trichloroethene	<0.50	20	21.3	µg/L	106	1.4	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	70 - 125
Dibromofluoromethane	108	70 - 125
Toluene-d8	98	70 - 125

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050815

Reviewed by: ECunniffe - 08/18/05

QC Batch ID Analysis Date: 8/15/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	127	µg/L	102	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	113	70 - 125
Dibromofluoromethane	101	70 - 125
Toluene-d8	102	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	132	µg/L	106	3.7	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	113	70 - 125
Dibromofluoromethane	102	70 - 125
Toluene-d8	101	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050816

Validated by: TFulton - 08/16/05

QC Batch Analysis Date: 8/16/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	105	70 - 125
Dibromofluoromethane	114	70 - 125
Toluene-d8	106	70 - 125

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050816

Validated by: TFulton - 08/16/05

QC Batch Analysis Date: 8/16/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	112	70 - 125
Dibromofluoromethane	104	70 - 125
Toluene-d8	103	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050816

Reviewed by: ECunniffe - 08/18/05

QC Batch ID Analysis Date: 8/16/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	22.7	µg/L	114	70 - 130
Benzene	<0.50	20	22.0	µg/L	110	70 - 130
Chlorobenzene	<0.50	20	22.5	µg/L	112	70 - 130
Methyl-t-butyl Ether	<1.0	20	25.6	µg/L	128	70 - 130
Toluene	<0.50	20	23.0	µg/L	115	70 - 130
Trichloroethene	<0.50	20	20.6	µg/L	103	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	70 - 125
Dibromofluoromethane	109	70 - 125
Toluene-d8	98.8	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	23.5	µg/L	118	3.3	25.0	70 - 130
Benzene	<0.50	20	22.9	µg/L	114	4.0	25.0	70 - 130
Chlorobenzene	<0.50	20	23.6	µg/L	118	4.7	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	26.0	µg/L	130	1.6	25.0	70 - 130
Toluene	<0.50	20	23.5	µg/L	118	2.2	25.0	70 - 130
Trichloroethene	<0.50	20	21.6	µg/L	108	4.6	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	101	70 - 125
Dibromofluoromethane	106	70 - 125
Toluene-d8	98.3	70 - 125

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050816

Reviewed by: TFulton - 08/16/05

QC Batch ID Analysis Date: 8/16/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	126	µg/L	101	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	112	70 - 125
Dibromofluoromethane	101	70 - 125
Toluene-d8	100	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	128	µg/L	102	1.3	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	114	70 - 125
Dibromofluoromethane	101	70 - 125
Toluene-d8	102	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050816

Reviewed by: ECunniffe - 08/18/05

QC Batch ID Analysis Date: 8/16/2005

MS Sample Spiked: 44754-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Benzene	ND	20	20.0	µg/L	8/16/2005	100	70 - 130
Methyl-t-butyl Ether	ND	20	23.0	µg/L	8/16/2005	115	70 - 130
Toluene	ND	20	21.1	µg/L	8/16/2005	106	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	110	70 - 125
Dibromofluoromethane	112	70 - 125
Toluene-d8	105	70 - 125

MSD Sample Spiked: 44754-001

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	21.1	µg/L	8/16/2005	106	5.4	25.0	70 - 130
Methyl-t-butyl Ether	ND	20	23.2	µg/L	8/16/2005	116	1.2	25.0	70 - 130
Toluene	ND	20	22.3	µg/L	8/16/2005	112	5.4	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	109	70 - 125
Dibromofluoromethane	112	70 - 125
Toluene-d8	106	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050817

Validated by: TFulton - 08/18/05

QC Batch Analysis Date: 8/17/2005

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	106	70 - 125
Dibromofluoromethane	113	70 - 125
Toluene-d8	105	70 - 125

Method Blank - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050817

Validated by: TFulton - 08/18/05

QC Batch Analysis Date: 8/17/2005

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	112	70 - 125
Dibromofluoromethane	103	70 - 125
Toluene-d8	102	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050817

Reviewed by: TFulton - 08/18/05

QC Batch ID Analysis Date: 8/17/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	23.2	µg/L	116	70 - 130
Benzene	<0.50	20	22.6	µg/L	113	70 - 130
Chlorobenzene	<0.50	20	23.4	µg/L	117	70 - 130
Methyl-t-butyl Ether	<1.0	20	25.4	µg/L	127	70 - 130
Toluene	<0.50	20	23.6	µg/L	118	70 - 130
Trichloroethene	<0.50	20	21.2	µg/L	106	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	70 - 125
Dibromofluoromethane	107	70 - 125
Toluene-d8	98.8	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	24.8	µg/L	124	6.7	25.0	70 - 130
Benzene	<0.50	20	24.0	µg/L	120	6.0	25.0	70 - 130
Chlorobenzene	<0.50	20	24.5	µg/L	122	4.6	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	25.9	µg/L	130	1.9	25.0	70 - 130
Toluene	<0.50	20	24.7	µg/L	124	4.6	25.0	70 - 130
Trichloroethene	<0.50	20	22.6	µg/L	113	6.4	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	70 - 125
Dibromofluoromethane	111	70 - 125
Toluene-d8	99.7	70 - 125

Laboratory Control Sample / Duplicate - Liquid - GC-MS - TPH as Gasoline - GC-MS

QC Batch ID: WM1050817

Reviewed by: TFulton - 08/18/05

QC Batch ID Analysis Date: 8/17/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
TPH as Gasoline	<25	120	134	µg/L	108	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	113	70 - 125
Dibromofluoromethane	100	70 - 125
Toluene-d8	101	70 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<25	120	125	µg/L	100	7.0	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	113	70 - 125
Dibromofluoromethane	100	70 - 125
Toluene-d8	101	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WM1050817

Reviewed by: ECunniffe - 08/18/05

QC Batch ID Analysis Date: 8/17/2005

MS Sample Spiked: 44764-004

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Benzene	ND	20	20.1	µg/L	8/17/2005	100	70 - 130
Methyl-t-butyl Ether	ND	20	22.2	µg/L	8/17/2005	111	70 - 130
Toluene	ND	20	21.1	µg/L	8/17/2005	105	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	109	70 - 125
Dibromofluoromethane	113	70 - 125
Toluene-d8	106	70 - 125

MSD Sample Spiked: 44764-004

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	20.9	µg/L	8/17/2005	105	4.1	25.0	70 - 130
Methyl-t-butyl Ether	ND	20	23.0	µg/L	8/17/2005	115	3.5	25.0	70 - 130
Toluene	ND	20	21.5	µg/L	8/17/2005	108	2.1	25.0	70 - 130

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	107	70 - 125
Dibromofluoromethane	112	70 - 125
Toluene-d8	104	70 - 125

Entech Analytical Labs, Inc.

3334 Victor Court
Santa Clara, CA 95054

Phone No.: (408) 588-0201 - Fax (408) 588-0201

Attention to: **Jim Green**

Company Name: **ECM GROUP**

Mailing Address: **P.O. Box 802**

City: **BENICIA**

State: **CA**

Zip: **94510**

Field Org. Code:

Sampler: **Mike Jackson**

Global ID:

Turn Around Time

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☐ 4 Day ☐ 5 Day

☒ Standard (10 Day)

Order ID:

Sampling

Matrix

Grab

Composite

Containers

Client ID:

Field PT

Lab. No.

Date

Time

MW-5

MW-6

MW-7A

MW-7B

MW-8A

MW-8B

8/11/05

11:40

W

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

Chain of Custody / Analysis Request

Purchase Order No (Reqd):

Send Invoice to (if Different)

Project Number:

Company

Project Name:

Billing Address (if Different)

City:

State

Zip

Project Location:

Preservative

Volatiles Organics by GC/MS:

MTBE by 8260B

8010 by 8260

601/602

8260B

PCBs - 8082

TPH as Gas/TEX

Base/Neutr/Acid Organics

8270-SIM

8270

Fuel Scan

Extractable

Purgeable

Motor Oil

w/ St-Gel Standard Cleanup

CN

TPH

Oil & Grease

Metals - Circle Below

STC

TTC

Remarks

44831-001

002

003

004

005

006

Special Instructions or Comments

NPDES Detection Limits

EDD Report Required

EDF Report Required

PDF File Required

Metals:

Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr,

Ti, Sn, Ti, V, Zn, W : RCRA-8

CAM-17

Plating

PPM-13

LUFT-5

APPENDIX D

WATER SAMPLING DATA SHEETS

WATER LEVEL & PRODUCT MEASUREMENTS

ECM group

PROJECT NAME & NUMBER: COTATI
98-516-14

DATE: 8/11/05
BY: MST

WELL ID	TIME MEASURED	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH	COMMENTS: (well condition, odor, etc.)
MW-1A			6.29	—	2" NS
MW-2A			7.47	—	2" NS
MW-3			6.06	—	2" NS
MW-4			5.86	—	2" NS
MW-5			5.76	24.65	2"
MW-6			7.80	19.90	2"
MW-7A			7.89	50	2"
MW-7B			10.22	80	2"
MW-8A			6.44	50	2"
MW-8B			7.29	80	2"

WATER SAMPLING DATA

Job Name COTATI Job Number 98-56-14
 Well Number MW-5 Date 8/11/05 Time _____
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 24.65
 Depth to Water (static) 5.76 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Formulas/Conversions

r = well radius in ft
 h = ht of water col. in ft
 $vol.$ in cyl. = $\pi r^2 h$
 7.48 gal/ft^3
 V_c casing = 0.163 gal/ft
 V_c casing = 0.367 gal/ft
 V_c casing = 0.653 gal/ft
 V_c casing = 0.826 gal/ft
 V_c casing = 1.47 gal/ft

Initial height of water in casing 18.89 Volume 3.07 gallons
 Total to be evacuated = $3 \times \text{Initial Volume}$ 9.23 gallons

Stop Time Start Time Bailed Pumped Cum. Gal.

Pumped or Bailed Dry? Yes ☒ No ☐ After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time							
Gallons							
Temp. (degree F)	<u>67.9</u>	<u>65.7</u>	<u>64.4</u>				
pH	<u>7.76</u>	<u>7.42</u>	<u>7.28</u>				
EC (umhos/cm)	<u>758</u>	<u>696</u>	<u>729</u>				
Special Conditions							

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal

11:40

WATER SAMPLING DATA

Job Name COTATI Job Number 98-516-14
 Well Number MW-6 Date 8/11/05 Time _____
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 19.90
 Depth to Water (static) 7.80 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Formulas/Conversions

r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft^3
 V_1 casing = 0.163 gal/ft
 V_2 casing = 0.367 gal/ft
 V_3 casing = 0.653 gal/ft
 V_4 casing = 0.826 gal/ft
 V_5 casing = 1.47 gal/ft

Initial height of water in casing 12.10 Volume 1.97 gallons
 Total to be evacuated = $3 \times$ Initial Volume 5.91 gallons

Stop Time Start Time Bailed Pumped Cum. Gal.

Pumped or Bailed Dry? Yes ☒ No After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time							
Gallons							
Temp. (degree F)	<u>72.1</u>	<u>73.6</u>	<u>73.0</u>				
pH	<u>7.57</u>	<u>7.13</u>	<u>7.18</u>				
EC (umhos/cm)	<u>596</u>	<u>638</u>	<u>663</u>				
Special Conditions							

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal

11:20

WATER SAMPLING DATA

Job Name COTATI Job Number 98-5K6-14
 Well Number MW-7/A Date 8/11/05 Time _____
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 50.00
 Depth to Water (static) 7.89 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 42.11 Volume 6.86 gallons
 Total to be evacuated = 3 x Initial Volume 20.59 gallons

Formulas/Conversions

r = well radius in ft
 h = ht. of water col. in ft
 $vol.$ in cyl. = $\pi r^2 h$
 7.48 gal/ft^3
 V_1 casing = 0.163 gal/ft
 V_2 casing = 0.367 gal/ft
 V_3 casing = 0.653 gal/ft
 V_4 casing = 1.026 gal/ft
 V_5 casing = 1.47 gal/ft

Stop Time Start Time Bailed Pumped Cum. Gal.

Pumped or Bailed Dry? Yes ☒ No After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6
Time						
Gallons						
Temp. (degree F)	<u>73.8</u>	<u>70.8</u>	<u>71.0</u>			
pH	<u>7.18</u>	<u>7.20</u>	<u>7.19</u>			
EC (umhos/cm)	<u>506</u>	<u>491</u>	<u>494</u>			
Special Conditions						

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal

6.86

WATER SAMPLING DATA

Job Name COTATI Job Number 98-516-14
 Well Number MW-78 Date 8/11/05 Time _____
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 88.00
 Depth to Water (static) 10.22 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 69.78 Volume 11.37 gallons
 Total to be evacuated = 3 x Initial Volume 34.12 gallons

Formula/Units
 r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V₁" casing = 0.163 gal/ft
 V₂" casing = 0.167 gal/ft
 V₃" casing = 0.153 gal/ft
 V₄" casing = 0.136 gal/ft
 V₅" casing = 0.147 gal/ft
 Cum. Gal.

Stop Time Start Time Bailed Pumped

Pumped or Bailed Dry? Yes ☒ No After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6
Time						
Gallons						
Temp. (degree F)	<u>74.6</u>	<u>70.2</u>	<u>69.4</u>			
pH	<u>7.34</u>	<u>6.65</u>	<u>6.87</u>			
EC (umhos/cm)	<u>620</u>	<u>546</u>	<u>558</u>			
Special Conditions						

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal

42:15

WATER SAMPLING DATA

Job Name COTATI Job Number 98-516-14
 Well Number MW-8A Date 8/11/05 Time _____
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 50.00
 Depth to Water (static) 644 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 43.56 Volume 7.10 gallons
 Total to be evacuated = 3 x Initial Volume 21.30 gallons

Formulas/Conversions

r = well radius in ft
 h = ht of water col. in ft
 $vol. in cyl. = \pi r^2 h$
 $7.48 gal/ft^3$
 $V_{2"} casing = 0.163 gal/ft$
 $V_{4"} casing = 0.367 gal/ft$
 $V_{6"} casing = 0.653 gal/ft$
 $V_{8"} casing = 0.876 gal/ft$
 $V_{10"} casing = 1.47 gal/ft$
Cum. Gal.

Stop Time Start Time Bailed Pumped

Pumped or Bailed Dry? Yes ☒ No After _____ gallons Recovery Rate _____

Water color _____ Odor _____

Description of sediments or material in sample: _____

Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time							
Gallons							
Temp. (degree F)	<u>87.0</u>	<u>78.4</u>	<u>77.0</u>				
pH	<u>11.87</u>	<u>11.93</u>	<u>12.03</u>				
EC (umhos/cm)	<u>778</u>	<u>898</u>	<u>924</u>				
Special Conditions							

SAMPLES COLLECTED

Sample	Bottle/ cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested
ID ml						

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal

13:50

WATER SAMPLING DATA

Job Name COTATI Job Number 98-516-14
 Well Number MW-8B Date 8/11/05 Time _____
 Well Diameter 2" Well Depth (spec.) _____ Well Depth (sounded) 80.00
 Depth to Water (static) 7.29 TOC elev. _____
 G.W. Elev. _____ Maximum Drawdown Limit (if applicable) _____

Initial height of water in casing 72.71 Volume 11.85 gallons
 Total to be evacuated = 3 x Initial Volume 35.55 gallons

Stop Time _____ Start Time _____ Bailed _____ Pumped _____

Formulas/Conversions

r = well radius in ft
 h = ht of water col. in ft
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft^3
 V_2 casing = 0.163 gal/ft
 V_1 casing = 0.367 gal/ft
 V_2 casing = 0.653 gal/ft
 V_3 casing = 0.826 gal/ft
 V_4 casing = 1.43 gal/ft

Cum. Gal.

Pumped or Bailed Dry? Yes ☐ No ☒ After _____ gallons Recovery Rate _____
 Water color _____ Odor _____
 Description of sediments or material in sample: _____
 Additional Comments: _____

CHEMICAL DATA

Reading No.	1	2	3	4	5	6	7
Time							
Gallons							
Temp. (degree F)	<u>77.4</u>	<u>72.2</u>	<u>71.8</u>				
pH	<u>7.13</u>	<u>6.90</u>	<u>6.74</u>				
EC (umhos/cm)	<u>393</u>	<u>393</u>	<u>388</u>				
Special Conditions							

SAMPLES COLLECTED

Sample ID ml	Bottle/cap	Filtered (size, u)	Preservative (type)	Refrig. (R, NR)	Lab (Init)	Analysis Requested

Bottles: P = Polyethylene; Pp = Polypropylene; C or B = Clear/Brown Glass; O = Other (describe)
 Cap Codes: Py = Polyseal; V = VOA/Teflon septa; M = Metal

13:10

APPENDIX E

ECM STANDARD OPERATING PROCEDURE

ECM STANDARD OPERATING PROCEDURE

GROUND WATER SAMPLING

The following describes sampling procedures used by ECM field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed 10%).

Ground water samples are collected from the wells/borings with steam-cleaned or disposable Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C with blue ice or ice) for transport under chain-of-custody to the laboratory.

The chain-of-custody form includes the project number, analysis requested, sample ID, date analysis and the ECM field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.